

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1-25. (canceled)

26. (currently amended) A ~~rotating~~ dental instrument comprising:

a shaft (1) ~~having an axis of rotation~~; and

a working member (2) which is secured to the shaft ~~or can detachably be secured thereto~~, said dental instrument having a longitudinal axis of rotation, said dental instrument being sized and configured to perform a dental procedure in a person's mouth, said dental instrument being sized and configured to rotate at a high speed effective to perform said dental procedure.

wherein at least part of the working member (2) is made from a ceramic material, characterized in that at least one cutting edge and/or tothing consisting of the ceramic material is provided in the outer surface of the at least part of the working member (2) that is made from the ceramic material such that the at least one cutting edge and/or tothing consisting of the ceramic material is adapted to perform a cutting function, ~~the outer surface of the working member (2) being configured to allow material cut away by the at least one cutting edge and/or tothing to proceed along the outer surface of the working member (2) in a direction that extends generally along the axis of rotation of the shaft, and~~ during the dental procedure, wherein the at least part of the working member (2) made from the ceramic material and containing the at least one cutting edge and/or tothing ~~and~~ consisting of the ceramic material has a surface roughness of 0.5 μm to 6 μm .

27. (previously presented) The instrument according to claim 26, characterized in that the at least part of the working member (2) made from the ceramic material has a surface roughness of 1 μm to 2 μm .

28. (previously presented) The instrument according to claim 26, characterized in that all geometrically created form transitions of the at least part of the working member (2) made from the ceramic material have radii of at least 0.01 mm to 5 mm.

29. (previously presented) The instrument according to claim 26, characterized in that all

geometrically created form transitions of the at least part of the working member (2) made from the ceramic material have radii of at least 0.5 mm.

30. (previously presented) The instrument according to claim 26, characterized in that the working member (2) is provided with a core reinforcement defined by the depth of grooves or cuts made to provide the at least one cutting edge and/or tothing and the depth of the grooves or cuts is reduced from the free end to the shaft of the working member (2).

31. (previously presented) The instrument according to claim 30, characterized in that the core reinforcement has a substantially conical basic shape.

32. (previously presented) The instrument according to claim 30, characterized in that the core diameter increases by 0.25° to 3° towards the shaft.

33. (previously presented) The instrument according to claim 30, characterized in that the core diameter increases by 1° towards the shaft.

34. (previously presented) The instrument according to claim 26, characterized in that the at least part of the working member (2) made from the ceramic material has a microhardened surface.

35. (canceled)

36. (previously presented) The instrument according to claim 26, characterized in that the surface of the at least part of the working member (2) made from the ceramic material is provided with a hard layer.

37. (currently amended) The instrument according to claim 26, characterized in that the surface of the at least part of the working member (2) made from the ceramic material has ~~at least~~ a depth mark.

38. (previously presented) The instrument according to claim 37, characterized in that the depth mark has a surface roughness of $1\text{ }\mu\text{m}$ to $10\text{ }\mu\text{m}$.

39. (previously presented) The instrument according to claim 37, characterized in that the depth mark has a surface roughness of 2 μm to 4 μm .

40. (previously presented) The instrument according to claim 37, characterized in that the depth mark is a laser mark.

41. (previously presented) The instrument according to claim 37, characterized in that the depth mark comprises cut-in grooves.

42. (previously presented) The instrument according to claim 26, characterized in that the entire working member (2) and the entire shaft (1) are made from a ceramic material.

43. (previously presented) The instrument according to claim 26, characterized in that the working member (2) has a metallic carrier (3) and at least one layer (4) that is provided thereon and comprises the at least one part of the working member (2) that is made of the ceramic material.

44. (previously presented) The instrument according to claim 43, characterized in that the layer (4) of the ceramic material is connected to the carrier (3) by means of an adhesive.

45. (currently amended) The instrument according to claim 26, characterized in that the at least part of the working member (2) that is made from the ceramic material has a surface that is free of pores and smooth.

46. (canceled)

47. (previously presented) The instrument according to claim 26, characterized in that the ceramic material comprises aluminum oxide and/or zirconium oxide.

48. (canceled)

49. (currently amended) The instrument according to claim 26, characterized in that said instrument is designed as a drill.

50-56. (canceled)

57. (currently amended) A method of performing ~~Performing~~ a dental procedure comprising the steps of:

(a) providing a ~~using the dental instrument of claim 54,~~ said dental instrument comprising a shaft and a working member which is secured to the shaft, said dental instrument having a longitudinal axis of rotation, said dental instrument being sized and configured to perform the dental procedure in a person's mouth, said dental instrument being sized and configured to rotate at a high speed effective to perform the dental procedure, wherein at least part of the working member is made from a ceramic material, characterized in that at least one cutting edge and/or tothing consisting of the ceramic material is provided in the outer surface of the at least part of the working member that is made from the ceramic material such that the at least one cutting edge and/or tothing consisting of the ceramic material is adapted to perform a cutting function during the dental procedure, wherein the at least part of the working member made from the ceramic material and containing the at least one cutting edge and/or tothing consisting of the ceramic material has a surface roughness of 0.5 μm to 6 μm ;

(b) rotating said dental instrument about said longitudinal axis of rotation; and

(c) causing said rotating dental instrument to contact tooth or bone and cut said tooth or bone in the course of the dental procedure.

58. (currently amended) ~~The dental procedure~~ method of claim 57 characterized in that all geometrically created form transitions of the at least part of the working member (2) made from the ceramic material have radii of at least 0.01 mm to 5 mm.

59. (currently amended) ~~The dental procedure~~ method of claim 57, characterized in that the at least part of the working member (2) made from the ceramic material is provided with a core reinforcement defined by the depth of grooves or cuts made to provide the at least one cutting edge and/or tothing and the depth of the grooves or cuts is reduced from the free end to the shaft of the working member (2).

60. (currently amended) ~~The dental procedure~~ method of claim 57, characterized in that the surface of the at least part of the working member (2) made of the ceramic material is microhardened.

61. (currently amended) The ~~dental procedure~~ method of claim 57, characterized in that the surface of the at least part of the working member (2) made from the ceramic material is provided with a hard layer.

62. (currently amended) The ~~dental procedure~~ method of claim 57, characterized in that the surface of the at least part of the working member (2) made from the ceramic material has at least a depth mark.

63. (currently amended) The ~~dental procedure~~ method of claim 57, characterized in that the dental procedure comprises one is selected from the group consisting of the generation of bone cavities, the treatment of bones and the insertion of implants.

64. (new) The dental instrument according to claim 26, wherein said working member has a length of 1-25 mm and a diameter of 1-25 mm.

65. (new) The dental instrument according to claim 26, wherein said working member has a diameter of 1-8 mm.

66. (new) The dental instrument according to claim 26, wherein said ceramic material has a density of 5.4 to 6.1 g/cm³.

67. (new) The dental instrument according to claim 26, wherein said working member has a twisted groove for material cut away.

68. (new) The dental instrument according to claim 26, wherein said working member is detachably secured to the shaft.